

## Case 2625

### ***Saccopharynx* Mitchill, 1824 (Osteichthyes, Saccopharyngiformes): proposed conservation**

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**Abstract.** The purpose of this application is to conserve the generic name *Saccopharynx* Mitchill, 1824, for a widely-known genus of gulper eels. It was technically proposed as a replacement name for *Stylephorus* Shaw, 1791, but has been recognised as valid and distinct from *Stylephorus* for more than 150 years.

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1. Mitchill (1824, p. 82) provided a lengthy description of an unusual deep sea fish which he did not name. He compared it with a bizarre species described by Shaw (1791, p. 90) as *Stylephorus chordatus*. Mitchill indicated that his specimen agreed with Shaw's specimen in many major features, but Mitchill dismissed portions of Shaw's account as inaccurate. For example, Shaw reported that his specimen had eyes on stalks (hence the genus name *Stylephorus*), but Mitchill (p. 86) states: 'The circumstance of their [eyes] standing on peduncles or footstalls is so much at variance with what occurs in other animals, that I should hesitate little in declaring their unusual form to have been the result of accident or disease.'

2. At the end of his description, Mitchill concludes by stating (p. 86): 'As the generic name proposed by Shaw is probably derived from an accidental character, I venture to substitute for it the name *Saccopharynx* in allusion to the pouch-like form of its throat.' Richardson (1836, p. 272) recognised the problem and concluded that 'Dr. Mitchill, believing his fish to be the *stylephorus chordatus* of Shaw, appears to have intended to retain the specific appellation, and merely to change the generic name to *saccopharynx*, which having the priority of *ophiognathus* must be adopted.' Mitchill's *Saccopharynx* is technically a replacement name for *Stylephorus* Shaw, although not recognised as such by current workers.

3. Mitchill's fish was in fact different from Shaw's and his genus is now placed in a separate order, the Saccopharyngiformes, in an entirely different division of fishes (the Elopomorpha) from the STYLEPHORIDAE (Robins, in press). *Stylephorus* has long been treated as a valid genus in a monotypic family STYLEPHORIDAE (see Hulley, 1986, p. 404).

4. Cuvier (1829, p. 355) provided a species name, *flagellum*, for Mitchell's specimen and *Saccopharynx flagellum* Cuvier has been continuously (but erroneously) regarded as the valid type species of *Saccopharynx auctorum*. The genus has been treated as valid since Cuvier and is the nominotypical genus of the family SACCOPHARYNGIDAE Bleeker, 1859 (p. xxxiii). The most recent review of the group is by Nielsen & Bertelsen (1985).

5. *Ophiognathus* Harwood, 1827 (p. 51; type species, by monotypy, *Ophiognathus ampullaceus*), described two years after Mitchell's account and two years before Cuvier's addition of a specific name, is available for *Saccopharynx auctorum* but is not in current use.

6. Although gulpers or gulper eels generally, and *Saccopharynx* specifically, are rather rarely caught and little known biologically, their bizarre appearance and numerous adaptations for bathypelagic life have attracted seemingly inordinate attention. Thus, they are written about in unabridged dictionaries and encyclopedias, and all general works on life in the deep ocean include an account of them. The popular literature which includes mention of *Saccopharynx* is extensive and includes books for children. *Saccopharynx* has been uniformly used for that genus of gulper eels. We are unaware of any primary use of *Ophiognathus* for these eels in this century and this probably holds true for the last half of the 19th century as well. The use of SACCOPHARYNGIDAE is similarly entrenched.

7. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary powers to suppress the specific name *ampullaceus* Harwood, 1827, as published in the binomen *Ophiognathus ampullaceus*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
- (2) to use its plenary powers to rule that Cuvier's designation of *Saccopharynx flagellum* Cuvier, 1829 as type species of *Saccopharynx* Mitchell, 1824 is valid;
- (3) to place on the Official List of Generic Names in Zoology the following names:
  - (a) *Saccopharynx* Mitchell, 1824 (gender: masculine), type species by subsequent monotypy confirmed in (2) above, *Saccopharynx flagellum* Cuvier, 1829;
  - (b) *Stylephorus* Shaw, 1791 (gender: masculine), type species by monotypy, *Stylephorus chordatus* Shaw, 1791;
- (4) to place on the Official List of Specific Names in Zoology the following names:
  - (a) *flagellum* Cuvier, 1829, as published in the binomen *Saccopharynx flagellum* (specific name of the type species of *Saccopharynx* Mitchell, 1824);
  - (b) *chordatus* Shaw, 1791, as published in the binomen *Stylephorus chordatus* (specific name of the type species of *Stylephorus* Shaw, 1791);
- (5) to place on the Official List of Family-Group Names in Zoology the following names:
  - (a) SACCOPHARYNGIDAE Bleeker, 1859 (type genus *Saccopharynx* Mitchell, 1824);
  - (b) STYLEPHORIDAE Swainson, 1839 (type genus *Stylephorus* Shaw, 1791);
- (6) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *ampullaceus* Harwood, 1827 as published in the binomen *Ophiognathus ampullaceus* and as suppressed in (1) above.

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